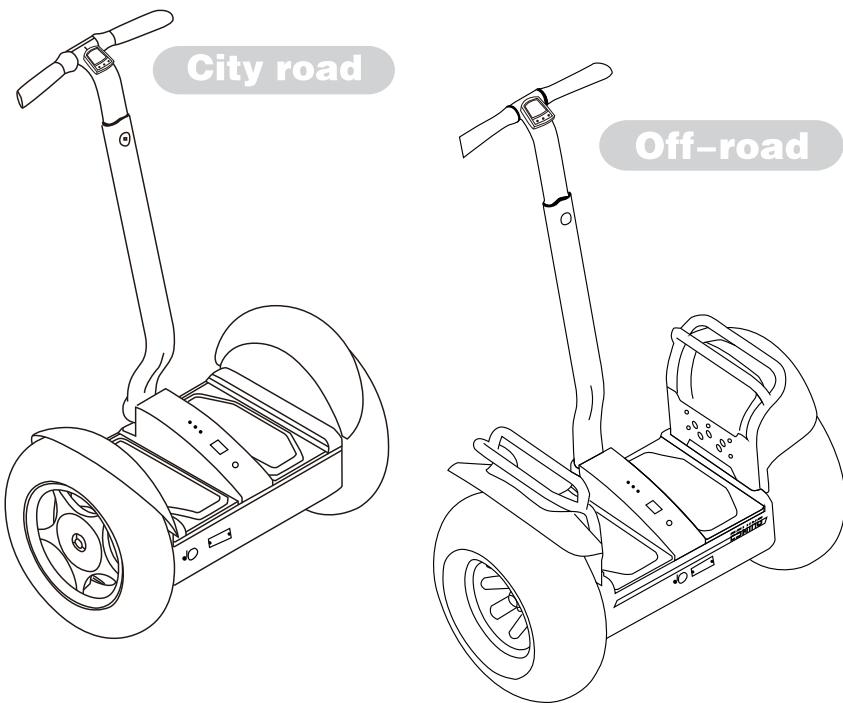


# User Manual for ESWING



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## **Welcome Use**

ESWING is the future of transportation with two wheels and a technology using a self-balancing electric vehicle.

To ensure ESWING brings you the best driving experience, please read this manual book carefully, it is user responsibility to follow all the safety instructions.

Recommended for adults use. Not suitable for children under 10 years. Parents are advised to accompany all children.

Please wear helmet, knee and elbow guards for safety purposes.

Do not abuse the unit.

Please maintain ESWING according to the user manual for best condition. If there is a need after service, please contact our agent who will take care for you.

Sincerely wish you have a nice driving.

**The user manual contains important safety information --- Please read carefully.**

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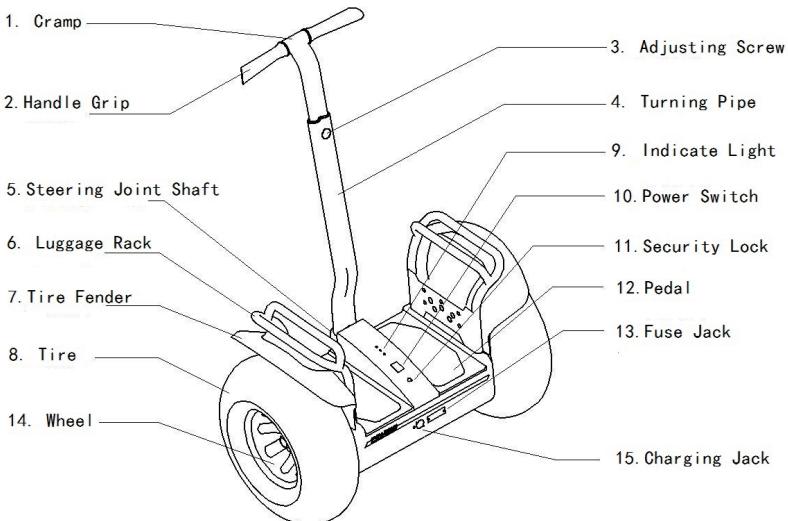
## Chapter I Introduction of ESWING

The working principle is based on the basic principle called "dynamic stability" which is the automatic balance ability of the vehicle itself. After judging body posture position with a built-in precision solid gyroscope, the vehicles electronic brain works out proper instructions through a sophisticated and high-speed central microprocessor, electric scooter will drive the motor to balance the vehicle.

As a new transporter, ESWING is difficult to classify in the traditional way, some people think that ESWING should be a kind of double-wheeled Unicycle, while other people think it should be classed as a power stand-up Scooter, with its uniaxial double design which is different from the traditional biaxial double scooter, for official road regulations, this transporter is called Electric Personal Assistive Mobility Device (EPAMD)

ESWING is equipped with dual wheels; its width is as narrow as a normal adult shoulder's width. It is around 46.5KG (Li-ion battery) operated. It is not necessary to have a brake or throttle during driving. When the driver leans his body forward, ESWING will run forward, when the body is upright, it will stop. It uses the dynamic balance principle, as the body moves to change the center of gravity so as to keep balance. Just as the human body stands and leans forwards it can lose balance, but the body's natural instinct will maintain balance, the dynamic stability replicates this. ESWING uses the wheels to replace the function of the feet, reproducing the high precision balance action of a human, it is also cheap and convenient to use. The energy comes from two repeat charging BTM batteries which are free from maintenance. If sufficient power is supplied to your battery, the full charge capacity will last continuous for 5 hours driving, the driving range depends on the way you drive and ground conditions, driving on grass and slopes will consume more driving power.

## Chapter II Parts Explanation



Picture 1

### 1. Handle Bar/Turning Pipe

(1) Used to control and make the ESWING turn left or right, turn around, rotate 360 degrees. It also has support function and can play a subsidiary role in keeping body balance.

(2) The height is adjustable. The driver can adjust it according to his or her own height to make the handle bar comfortable.

(3) Lock the steering rod after adjustment, then turn the handle bar to confirm that it has had been locked.

(4) Above adjustment of the handle bar/ turning pipe should be locked in position before driving.

(5) The turning pipe can be taken apart easily for carrying or storage.

### 2. Power Switch

(1) The power switch is used to turn on and off the power, when the power switch is on the ESWING will finish the initialization-settings.

(2) It is dangerous to stand on ESWING without turning on the power.

### 3. Pedal Switch (SAFE switch)

(1) Under each left and right foot pedal, there are 2 switchers, which can help connect complete the system and recognize if there is any foot or people on ESWING;  
(2) Once you leave ESWING, it recognizes nothing on and will alarm.  
**Tip:** You must keep at least 1 pedal switcher works, and disconnect the others (totally 4 pedals switchers).

### 4. Indicator Lights on Pedal

(1) Green light (Operating light 1)

Battery is full, system is normal.

(2) Orange light (warning light 2)

Battery will run out soon.

(3) Red light (warning light 3)

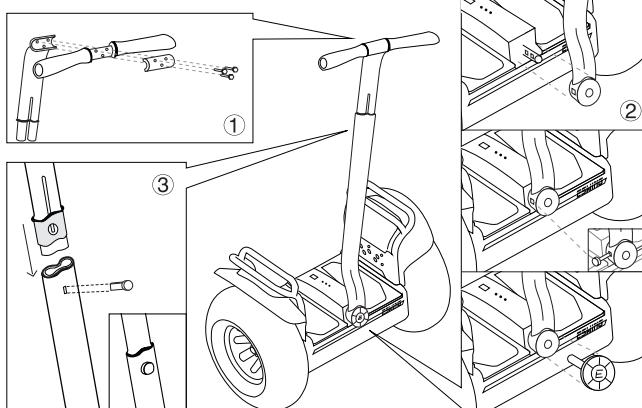
Battery will run out completely

### 5. Assembly instruction of steering pipe

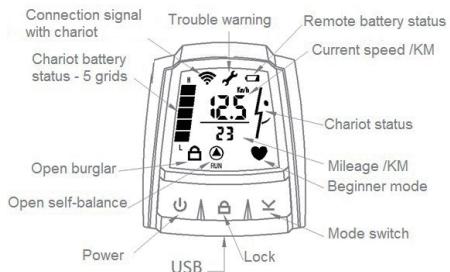
(1) Assembly the handlebar: Use the smaller hex screwdriver (along with the package) to fix the 3 screws with the assistant bar with the handlebar.

(2) Assembly the steering pipe: Take out the round cover at the end of pipe, and take out the screw on the left side of the pipe; push the pipe into the joint, fix the screw afterwards.

(3) Assembly the steering pipe up and down parts: Slot the up part into the down part, be carefully to the tube height, it could help to adjust the total height as your body height; after that, fix the screw bolt.



## Chapter III Instruction manual of remote control



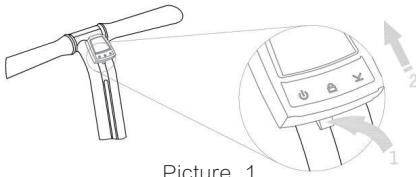
### Remote control - icons explanations

#### CAUTION

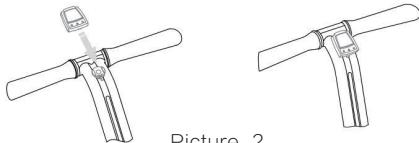
If the chariot upwards, don't lean it forward anymore, the rider must lean backward firmly to stop immediately; otherwise the rider will be fall off and hurt himself, even more serious consequences happened if not in according with the speed limit.

Please ride carefully to avoid falls. Beginners are recommended to use beginner mode.

### Install the remote control then the instruction on how to connect



Picture. 1



Picture. 2

Take remote control out,  
operate according to picture.1

Put remote control back,  
operate according to picture.2

### How to connect the remote to the unit

1. Press power  key on the remote to turn ON;
2. Press power key  and lock key  together, the wifi symbol will flash;
3. During the flashing, turn ON the power switcher on the chariot;
4. Then connected ESWING and the remote.

### How to turn ON/OFF the front&back lights

Long pressing on the 3rd key .

### 1、Beginner mode

Press  key and  icon displays, it means beginner mode starts, and the speed is limited within 6KM. You can press  key again to exit the beginner mode.



Press  key to enter Beginner mode and speed limited within 6KM/h; press key again to exit the mode.

## 2. Self-balance mode (shove mode)

Press  key and  displays, it means chariot starts self-balance mode, you can easily push the chariot go ahead. You can press  key again to exit self-balance mode, and  icon will disappears. A one-second long pressing on  key to turn on the screen backlight, and long pressing again to turn off the screen backlight.



Press  key to enter self-balance mode.

## 3. Lock mode

Press  key and  displays, the chariot starts lock mode. If anyone moved it, alarm sound will ring out; press  again to release burglar mode.

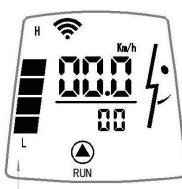


Press  to enter burglar mode.

## 4. Chariot battery status

The chariot battery is showed by 5 grids. With the battery gradually reducing; the chariot will automatically limit speed in order to ensure the safety to the riders.

Note: Above 4 grids, speed limited at 16KM/H; 3 grids, speed limited at 14KM/H; 2 grids, speed limited at 8KM/H; 1 grid, speed limited at 5KM/H.



Chariot battery status

## 5. Connection signal with chariot

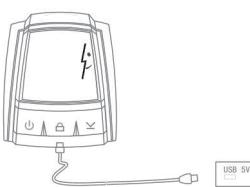
The chariot connection signal distance is within 15 meters; once beyond this range, the remote will display no connection.



Lose connection

## 6. Remote control low battery status

Once the icon of  displays, it means battery is low and less than enough. Please take the remote control off, charge it by connecting with computer or 5V power source by a Micro USB cable. Once charging completed, low battery icon will disappear automatically.



Remote control battey fully charged

## Chapter IV Getting Started

### 1.The Right Starting Operation

Hold the turning pipe/handle bar with one hand, keeping the pedal upright ,turn on the power, after green light, orange light and red light flash at the same time, and the green light stay on continuous, it means starting success (refer to picture 3,4,5). Then hold the handlebar firmly with two hands (refer to picture 6).

Make sure the pedal is on horizontal level when power on, because ESWING cannot power on if it is not on horizontal level.



Picture 3



Picture 4



Picture 5



Picture 6

## 2. Wrong Starting Operation (refer to picture 7 and 8 )

ESWING cannot power on if it is not on horizontal level, so we must make sure the pedal is on horizontal level, then power on it.



Picture 7



Picture 8

## 3. Correct Starting Operation (refer to picture 9)

Make the pedal of ESWING on horizontal level before power on it.



Picture 9

## Chapter V ESWING Driving

Driving the ESWING is totally different from anything you may have driven before, ESWING does not have a brake, accelerator or gear system. Please read the user manual or get instruction from an experienced person for your first driving.

ESWING is very addictive once you enjoy the fun of driving, you could not stop driving whenever you get the chance. The following instructions will be beneficial for your enjoyment.

Below description will be helpful to your driving.

**Tip:** We suggest you use Beginner Mode if you did not driver our ESWING before.

We are offering you driving detail as below:

It is with big gear tires apply for all landform, it can conquer all kinds of grounds made of dirt, gravels, grasses or sands, since the wider ruts increase its stability, and the higher chassis ensure your driving will pass thought steep slopes, uneven surfaces and part of the rock exposed. ESWING can travel up to 35 km after completely charging.



Picture 10



Picture 11



Picture 12



Picture 13

## 1. Standing on ESWING

After switching on, hold the handle bar with left hand, mean while step on pedal with right foot (refer to picture 14); or vice versa. To keep it balance, just stand upright without any movement (refer to picture 15).



Picture 14



Picture 15

## 2. Driving straight forward

Lean your body forward slowly using the centre of gravity, ESWING will forward (refer to picture 16). The driving speed is controlled by the leaning angle of your body. For a stable driving, we suggest you lean slowly forward little by little. It is very dangerous if lean forward suddenly, a sudden acceleration may cause lost of balance.



Picture 16

### 3. Braking, Driving Backward

Driving backward is not recommended for the driver's safety. Turning radius of ESWING is zero, which can be easily achieved in continues spin around 360 at one spot. When driving forward in a straight line and want to slow down or stop, you can just lean backward or squat down (the center of gravity backward). Lean slowly or smoothly backward is helpful for slowing down and stopping safely (refer to picture 17).



Picture 17

**Tip:** Driving forward in a straight line you just simply push the handle forward, then backward to slow down or stop.

### 4. Turning in Original Place, Turn Around and Rotate 360°

It is easy to turn the ESWING when driving. Keep the turning pipe/handle bar left-forward or right-forward to the end, at the same time keep your body correspondingly left-forwarded or right-forwarded as the trend of ESWING (refer to picture 18 and 19). Thus you can easily achieve various turns. When the ESWING faces the right position, you just need return the pipe to the original position and stand straight ESWING will stop.



Picture 18



Picture 19

## 5. Turning during Driving

ESWING's turning range is calculated automatically according to the driving speed, the speed is faster, the turn range will be less to ensure safety of the driver, and it is stopped by the turning pipe and body's corporation. To turn left, the turning pipe should be swung smoothly to the left at the same time as your body leans left. The angle of ESWING's turn is decided by the swinging angle of the turning pipe and the leaning of your body.

## 6. Upslope and downslope

The max climbing degree of ESWING is 25°, it is also depend on the driver's actual skill. Before climbing up slope, you should increase the speed in advance, keeping two wheels parallel and keeping your body forward slightly. When getting down slope, you should also remain two wheels parallel and keeping your body backward slightly to maintain the center of your body gravity by holding the handle.



Picture 20



Picture 21

## 7. Driving in bad weather

ESWING is not waterproof; please do not drive it in rainy day. The water may damage the electronic mechanic. ESWING does not recommend to be operated during the night (Light accessories is optional). ESWING can be operated on snow, however this is not recommend for a beginner.

## Chapter VI Charging

When you find the orange light and red indicator are continuously on, it shows the batteries need to be charged. Firstly, turn off the power switch and use the specialized battery charger. Insert the plug into ESWING 's charge jack. Then turn on the power. When charger is connected, the Red light will glow continuously, showing ESWING is in charge mode (refer to picture22).

The charger has two light, Red light means charging mode, Green light means fully charged, please pull out the charger AC inlet in soon. The fully charging normally takes 3-5 hours. When fully charging finished, the Green light will be on continuously, and the charging electric current will decrease output current. During charging, the charger may get warmer, please place it on suitable area.



Picture 22

***Must keep power switch OFF when charging, otherwise it will cause power consumption, which is bad for charging and battery life.***

## **Chapter VII Maintenance**

All other items that are not mentioned in this chapter in the below should be done by a professional person or technician.

### **1. The Maintenance of Battery**

Self-Balanced Vehicle use BTM free maintenance battery. When you find the orange light and red light are continuously on, please do charging in soon. Keep the charge time no more than 15 hours. Even if you will not use ESWING for long periods, you also need charge it. Over- discharging or overcharging is bad for the battery life, and even to scrap. (Suggestion: please keep it charged every month even though you don't drive it)

### **2. When not Drive ESWING**

Please turn off the power switch and lock the key in case of accidental starting.

### **3. Fastening the Nut of Tire**

Pay attention to the big nut on the wheel, please do regularly checking; if it is loose, you must stop the driving and tighten it with a 21mm spanner by approximate 108Nm torque.

### **4. Maintenance of Tire**

The normal air pressure is the basic guarantee your safe driving. The standard tire pressure is 80kpa = 0.8bar = 0.8 kg, which is we recommend. It is necessary to check the tire pressure regularly, under inflation and over inflation will cause tire unequally wear and tear, influences control and comfort, and also shorten the life of tire. In addition, under-inflated tires also influence the power saving.

Please also check if there any cuts, splits or other things which could cause the tire to be damaged worse; and to check if there is necessary to replace one new tire.

### **5. Appearance Cleaning**

It is necessary to keep the pedal and body of ESWING clean. Please clean the gravel, soil and mud off after driving. Don't use any corrosive chemical such as petrol to clean ESWING, you can clean it by soft cloth and brush. Don't wash ESWING with water.

## Chapter VIII Notice

### 1. Balance Output of ESWING

Computer balance can start immediately when you step on the pedal of ESWING. If you keep pressing the pedal switch, the computer balance will always on. But the computer keeps balance output only 5-second at a low speed, then OFF automatically as the pedal switch restored. Please pay attention that ESWING will keep balance always if the balance output function is ON, it means letting this scooter on a flat road without driver on it will go forward by itself.

### 2. ESWING Parking

If for temporary parking, you can just turn on the balance output by remote control and lean it against a wall or step that can stop it from moving forward; if for long time parking, you can switch off the power and put the supporting foot down. This parking supporting foot can be purchased from us independently.

### 3. Water Accident

Turn the power off immediately if ESWING poured into water accidentally. Do not drive it again if you are not sure of the default. The ESWING weighs 55kg, you can take it home easily without help; and please contact us for after-service guide.

### 4. Lock Switch

To lock ESWING is for preventing accidental run. Just power off and lock, then try to power on again, if red light flashes 5 times, it means ESWING is locked.

When ESWING is ON and already initialized, if you lock at this time, it will lead to pedal switch short circuited. ESWING will think one driver standing on it and will start balance automatically. Please do not drive under this situation.

In some countries, ESWING is difficult to define vehicle type, so please don't drive on public roads used for motor vehicles .When driving on the sidewalk, single driveway or public places, please obey the local traffic rules.

## Chapter IX Indicator and Sound Alarm

### 1. Indicator introduction

(1) Green light (Indicator light 1)

**Continually On (no blinking):** System starts normally, and battery is full.

(2) Orange light (Warning light 2)

**Continually On (no blinking):** Battery is low; it needs charge in time.

**Blinking:** Overload!

(3) Red light (Warning light 3)

**Continuous on (no blinking):** battery run out and must charge immediately.

### 2. Alarm Sound and light blinking fast:

The pedal switch is not in the correct position (the pedal switch is pressed down) or the driver left the ESWING when driving, which can make the pedal switch restore (the pedal switch is pulled up). In this situation, if the pedal switch is still not in the correct position in 3 seconds (the pedal switch is pressed down), ESWING will think the driver has fallen off and will stop automatically to keep the driver safe.

***Please remember, pedal switch must be in right position (the pedal switch is pressed down), or ESWING will switch off power and the rider will lose balance.***

### 3. Alarm Sound and light blinking 5 times

(1) Check whether Lock is locked. If locked, the power indicator will not light and alarms 5 times when you power on. It is because we locked it as factory default mode to avoid transportation accident, so please unlock ESWING before driving.

(2) Pedal problem also leads alarm sound and lights blinking 5 times, you can press pedal switch on several times by hand or feet to make pedal restore (the pedal switch is pressed down). Then try to test it by powering on ESWING again, if alarm sound and lights blinking are still there, please contact the technicians.

#### **4. Indicator light is normal, ESWING cannot use**

After power on ESWING, green light, orange light and red light flash at the same time; after then, green light should be continuous on as normal starting. If the scooter can't balance by using remote control or pressing pedal switch ON, it means that there is some problem on gyroscope or accelerometer. In above two situations, please power off ESWING and stop driving, then contact the technicians.

#### **5. Function of battery display and sound alarm**

**Green light continually On:** System works well and battery in normal state.

**Orange light continually On:** Battery is less, need to charge in time.

**Red light continually On:** Battery power run out and must charge immediately.

Always keep battery charged before it is fully run out (red light is continually on). It is harmful to battery and will reduce battery's life.

Parameter Of Eswing	ESWING C3 (ES1349)	ESWING C3X (ES1349X)	ESWING W1 (ES1350)	ESWING W1X (ES1350X)
Unit imension(W*D*H)	68cm*43cm*43cm	68cm*43cm*43cm	83cm*47cm*60cm	83cm*47cm*60cm
Packing size	74.5cm*45.5cm*51cm	74.5cm*45.5cm*51cm	86cm*52.5cm*72.5cm	86cm*52.5cm*72.5cm
Container loading units(20GP/40GP/40HQ)	160 / 336	160 / 336	84 / 168	84 / 168
n.w	43kg	38kg	55kg	46.5kg
Max Load	100kg	100kg	110kg	110kg
Power	Brush DC Motor	Brush DC Motor	Brush DC Motor	Brush DC Motor
Tyre	17" Vacuum (Aluminum Alloy Rim)	17" Vacuum (Aluminum Alloy Rim)	19" Vacuum (Aluminum Alloy Rim)	19" Vacuum (Aluminum Alloy Rim)
Min Turning Radius	0m	0m	0m	0m
Max Climbing	≤ 30°	≤ 30°	≤ 30°	≤ 30°
Max Speed	14km/h	14km/h	16km/h	16km/h
Max Mileage	25km	30km	25km	30km
Height of Handle	80-110cm /adjustable	80-110cm /adjustable	80-110cm /adjustable	80-110cm /adjustable
Height of Pedal	260mm	260mm	270mm	270mm
Max Height off.ground	130mm	130mm	160mm	160mm
Charging Time	6-8h	4-6h	6-8h	4-6h
Battery value	3pcs*12V/14Ah	36/15Ah	4pcs*12V/14Ah	48V/11Ah